

# Capitol Region Council of Governments

241 Main St., Hartford, CT 06106  
Phone: (860) 522-2217 FAX: (860) 724-1274  
Web Page: [www.crcog.org](http://www.crcog.org)

**DATE:** MARCH 8, 2013  
**TO:** CHAIRMEN AND MEMBERS OF TRANSPORTATION COMMITTEE  
**FROM:** LYLE WRAY, PHD, EXECUTIVE DIRECTOR, CAPITOL REGION COUNCIL OF GOVERNMENTS  
JENNIFER CARRIER, PE, DIRECTOR OF TRANSPORTATION PLANNING, CAPITOL REGION COUNCIL OF GOVERNMENTS  
MARK CARLINO, PE, DIRECTOR OF PUBLIC WORKS, TOWN OF MANCHESTER  
**SUBJECT:** SUPPORT FOR GOVERNOR'S BILL NO. 849, AN ACT CONCERNING LOCAL BRIDGE PROGRAM REFORM AND ESTABLISHING A LOCAL TRANSPORTATION CAPITAL PROGRAM.

My name is Lyle Wray, Executive Director of CRCOG, here with Jennifer Carrier (CRCOG's Director of Transportation Planning) and Mark Carlino (the Director of Public Works in Manchester).

We are here today representing the Capitol Region Council of Governments, which is the Regional Planning Organization (RPO) serving the City of Hartford and the 29 surrounding towns. The Council of Governments wants to express its support for Governor's Bill No. 849, An Act Concerning Local Bridge Program Reform and Establishing a Local Transportation Capital Program offering the following comments.

Our legislative priorities for 2013 include support for investing in our transportation infrastructure, ensuring a state of good repair is maintained, and streamlining design and construction processes. The Regional Transportation Plan for the Capitol Region also supports initiatives that assist Municipalities in securing monies to address bridge repair, replacement or removal on town roadways. For these reasons we felt it was important that we testify today.

As it relates to establishing a **Local Transportation Capital Program** we support the big picture of developing a program to assist in streamlining municipal project delivery and delivering them at lower costs however we have a few apprehensions.

- CRCOG's greatest concern is that we create a Local Transportation Capital Program that is not sustainable (or easily able to be relied on year-to-year). Meaningful Transportation Improvement Programs (and regionally significant projects for that matter) require multi-year funding commitments that are not subject to annual budgetary or economic pressures.

The reason that the federal STP-Urban Program has been so successful for nearly 25 years is because it has provided Regional Planning Organizations and municipalities with stable and consistent funding for transportation improvement projects year after year.

For this reason we have proposed to the Connecticut Department of Transportation (CTDOT), who would be the responsible State administrating agency, that we introduce safeguards including provisions for RPO's to obtain (or retain) federal funding if the state program is diminished or eliminated. CTDOT has expressed to us their inability to manage two separate programs, primarily due to administrative burdens. We feel this limitation will be an obstacle in successfully implementing a Local Transportation Capital Program.

- Another apprehension is that the program created under this bill may not offer flexibilities that the current federal program does as it relates to project eligibility. The legislation is not overly detailed, which allows some flexibilities, however we want to ensure any new program maintains flexibility permitting reconstruction, pavement rehabilitation, sidewalk, bicycle and pedestrian projects and studies. CTDOT is working to secure our input on the development of a program. In this same capacity we are suggesting, through our written testimony, that we add in language that CTDOT works “in partnership with the RPO’s.”

To further elaborate on “partnerships” with the RPO’s, we feel the Local Transportation Capital Improvement program should be structured to provide more oversight at the Regional Planning Organization (RPO) level - something that occurs in other states across the nation.

We would also suggest the Committee review our written testimony and associated flow chart on how we may be able to structure a streamlined program.

As it relates to the **Local Bridge Program**, CRCOG supports the bill, particularly the increased grant percentages to municipalities and streamlining design and permitting processes to more efficiently deliver important transportation infrastructure.

Historically the Local Bridge Program has been a solid source of funding for municipal bridge rehabilitation and reconstruction projects however the funding was transferred into the general fund as a deficit mitigation effort in 2009.

Since 2009 we have had a difficult time advancing structural bridge projects within the Capitol Region and have had to work creatively to finance projects with other sources which has been a difficult task. This bill would assist in re-establishing a historically successful program to address a backlog of bridge projects and advance them in a streamlined, cost efficient manner.

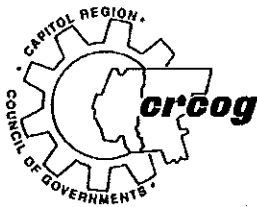
Thank you to the Committee for the opportunity to present today.

The Capitol Region Council of Governments (CRCOG) respectfully submits the following administrative edits / suggested changes for:

**GOVERNOR'S BILL NO. 849, AN ACT CONCERNING LOCAL BRIDGE PROGRAM REFORM AND ESTABLISHING A LOCAL TRANSPORTATION CAPITAL PROGRAM.**

Section 1. (NEW)

- (a) Language that references "local planning agency" should be modified to reflect "Regional Planning Organization (RPO)" – Comment is applicable throughout bill
- (c) We suggest the last sentence be revised as follows, "... through guidelines developed by the Department of Transportation in partnership with the Regional Planning Organizations."
- (d) The bill proposes a "...service life of approximately twenty years" which is reasonable for most capital projects however adds complexities to pavement rehabilitation projects which are currently required to meet a minimum life expectancy of 15 years within the federal program. Increasing the service life requirement for pavement rehabilitation projects by an additional five years introduces complexities in design and can greatly increase projects costs (i.e. more extensive pavement cross section). For this reason we suggest the following sentence be added, "The designed pavement structure for pavement rehabilitation projects should meet a minimum life expectancy of fifteen years."



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Mary Glassman, Chairman

Lyle D. Wray, Executive Director

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Mr. Hugh Hayward  
Highway Design Local Road Section  
2800 Berlin Turnpike  
PO BOX 317546  
Newington, CT 06131-7546

Dear Mr. Hayward,

The Capitol Region Council of Governments (CRCOG) has reviewed the Department's *Draft Proposal for a Local Transportation Capital Program* dated September 11, 2012. CRCOG's municipalities feel the proposed program could offer substantial benefits over the existing process; however additional program details are needed prior to it receiving regional support. Provided below are the Region's major comments on the draft proposal:

- The proposed funding source needs to be secure and indexed to the STP-Urban funding amounts. Potential funding safeguards should be explored, including provisions for regions to obtain (or retain) STP-Urban funds if state funding is diminished or eliminated. CRCOG suggests a process where the regional STP-Urban funds are exchanged annually for state funds once they are secured. The federal and state fiscal years need to be considered in determining the best approach for this exchange.
- The new program needs to ensure flexibility as it relates to eligibility. As with STP-Urban funds, Pavement Rehabilitation projects, Bicycle/ Pedestrian projects, and Planning Studies should remain eligible in similar proportions to current allotments (the most recent CRCOG solicitation allowed for 15% Pavement Rehabilitation/Stand-alone Sidewalk, 5% Bicycle/ Pedestrian, and approximately 5% Studies).
- This opportunity to streamline the project delivery process should be fully realized. Two DRAFT flow charts are attached showing the current STP-Urban project process, and a CRCOG recommended streamlined process. As shown in the recommended process, ConnDOT reviews would only be necessary for determining project eligibility and financial matters. CRCOG suggests that interdisciplinary project reviews, including certification of

design life and compliance with standards be provided by a pre-selected consultant liaison retained by the Regional Planning Organization (RPO).

- CRCOG recommends the use of municipal design standards/specifications for municipal projects, and state design standards/specifications for projects involving state roadways. For projects on state roadways only, the use of ConnDOT Right-of-Way acquisition procedures, and a certification by the pre-selected consultant liaison that the project is progressed consistent with ConnDOT goals and standards are also envisioned.
- CRCOG recommends that RPOs operate in a program management role and that ConnDOT confirm project eligibility and review program financials.
- Once awarded, the process used to access grant monies should be uncomplicated and payments should be prompt. CRCOG prefers a grant system that operates on a draw down expenditures basis.

This represents a listing of the CRCOG's major comments. More detailed information can be found in the attached *CRCOG Transportation Committee Working Group Meeting Minutes*. We also feel that the review of, and potential incorporation of elements from similar programs in other states could be useful (such as Kansas DOT's Federal Fund Exchange program: <http://www.ksdot.org/burlocalproj/default.asp>).

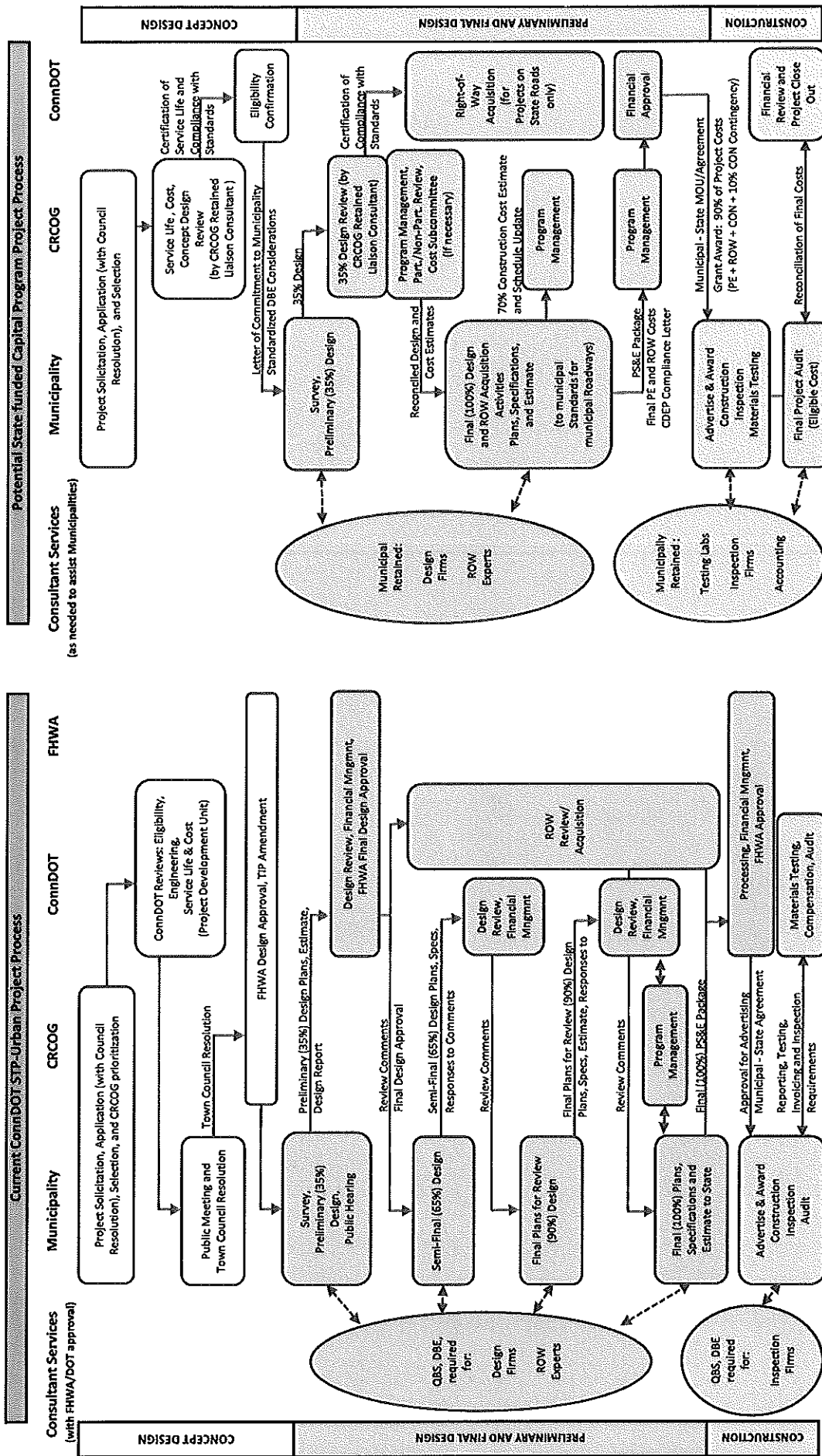
We would like to express our appreciation for the Department's efforts in progressing this streamlining proposal. CRCOG staff, and staff from our member municipalities, is available to contribute further towards this proposal's refinement, including actively participating in any working groups that may be formed for this purpose. We look forward to working with you further to help ensure this proposal realizes its best chance for success.

Sincerely,



Lyle D. Wray  
Executive Director

cc: Jon Colman, CRCOG Transportation Committee Chair  
Jennifer Carrier, CRCOG Director of Transportation Planning  
Jennifer Trio, ConnDOT Assistant to the Chief Engineer



**Capitol Region Council of Governments**  
**241 Main St., Hartford, CT 06106**  
**Transportation Working Group Meeting**  
**Monday September 24<sup>th</sup>, 2012**

<b>Name</b>	<b>Organization</b>
Russ Arnold	Farmington
Jonathan Thiesse	Bloomfield
Billy Taylor	Enfield
Thom Deller	Hartford
Mark Carlino	Manchester
Chris Greenlaw	Newington
Jim Sollmi	Rocky Hill
Jeffrey Doolittle	South Windsor
Rick Baldwin	CCEJ
<b>Staff</b>	
Jennifer Carrier	CRCOG
Rob Aloise	CRCOG

1. **Roll Call** – Jennifer Carrier called the meeting to order at 10:00 a.m.
2. **Public Forum** – No one from the public chose to speak.
3. **Discussion of ConnDOT's Draft Proposal for a Local Transportation Capitol Program**
  - A. Ideas to making State Funds more secure
    - Each of the current bonded funding sources (Local Bridge Program, STEAP, etc.) are at the mercy of the legislature
    - Could a portion of the gas tax be utilized to fund this program?
    - Potentially, CRCOG could retain federal funding, transferring it to ConnDOT annually at the time state funding has been obtained
    - There is a need for an agreement to ensure that if state funding is diminished, STPU funds return to the regions
    - If we were to transfer or reclaim STPU funding (as in prior two bullets), there would be a need to synchronize bond approval with the Federal Fiscal Year
  - B. How could changes benefit municipalities
    - The whole purpose of the policy change is to streamline. If Federal funds are **not** involved, the process could be made much simpler with projects could be delivered quicker and cheaper (less inflation risk, less red tape and less stringent standards)
    - ConnDOT's review process, especially hydraulics unit reviews result in costly changes
    - When municipal jobs are prepared, municipal standards are generally used – pavement is what we can obtain cost effectively from the plant
    - The potential benefits to municipalities depend on what design standards need to be followed and how extensive the review processes are.

C. Good services the STP-U program currently offers

- MSAT team results are not speedy
- Some have found MSAT team helpful as a resource
- ConnDOT staff assistance is very helpful if federal regulations (or similar) need to be followed. If not, towns would rather use in-house staff or hire a consultant

D. How can the program help smaller communities

- If the program is implemented, a potential help to all communities would be if CRCOG could secure on-call specialty services (design review, right-of-way, inspection, accounting, etc.) for use by any town

**Discussion of DOT proposal 1** – The new source of funds would be state bonds and any proposed capital improvement will require a 20 year service life. It would not be a paving program.

- Funds need to be stable and flexible. Pavement Rehabilitation, Bike/Ped projects, and Planning projects should be allowed (at least in same percentages as today)
- The funding stability and the need to keep Pavement Rehab and Bike/Ped are each large issues. They warrant being split when presented/discussed.
- The 20 year design criteria may be necessary. There may be regulations that mandate the capital improvement needs to last as long as the bond period, which typically is 20 years for State bonds.

**Discussion of DOT proposal 2** – The funding distribution would reflect the current STP-Urban population driven process by MPO and the annual budget request would coincide with the anticipated STP-Urban federal funding levels for that year.

- CRCOG needs to maintain at least the same involvement in the management of funds as they currently do.
- Some agreement that municipal projects generally do not conflict with DOT design manual criteria, however specs are not typically followed. Sometimes Municipal and DOT design criteria does conflict, such as with rates and breaks in cross-slopes. A third party could be retained to conduct a review of projects to maintain minimum standards within the program.
- Municipalities should be allowed to track time for reimbursement (or use as the local match).

**Discussion of DOT proposal 3** – Eligibility for funds would require a minimum roadway classification of a collector. Bridge improvements would be eligible on any public road.

- Currently there is an exception for off-road Bike/Ped projects. It is desired that the exception be maintained as Bike/Ped projects are important and the STP-Enhancement program is less secure under MAP-21.
- There is increasing pressure in communities to provide Bike/Ped improvements and they should still be eligible under this program.

**Discussion of DOT proposal 4** – Project funding split would be 90% State 10% Local.

- Projects on state roadways should be 100% state funded.
- State and Local roads will likely need to follow different processes.



- CRCOG should map the envisioned processes for State and Local roads. A process with more DOT involvement for State roads will likely put DOT's mind at ease.

**Discussion of DOT proposal 5** – The MPO's would still solicit, rank and submit projects, to the Department, in a fiscally constrained abbreviated process following municipal estimating practices.

- It is desired that the DOT Project Concept Unit only be involved with State Roads

**Discussion of DOT proposal 6** – Preliminary Engineering (PE), Rights of Way (ROW), Construction and construction inspection activities would be eligible costs. PE and ROW will be funded upfront by the municipalities.

- It would be good if DOT services were available by municipality choice, but not mandated, perhaps on a pay as needed basis
- If DOT services are used, it is difficult to cost out project. Would rather have 3rd party consultants perform these services.
- May be best if these services are only used on State Roads, municipalities could hire their own consultants for Local Roads if they cannot do the work in-house (or CRCOG retain on-calls for this use)

**Discussion of DOT proposal 7** – It is anticipated that there would be an initial application process as mentioned above, a review by the Department for eligibility and 20 year service life, followed by a letter of commitment to move forward with project design.

- It would be best if this Department review was a cursory one

**Discussion of DOT proposal 8** – Projects will comply with the Connecticut Environmental Policy Act (CEPA). Most town sponsored projects will meet CEPA by way of the Department of Transportation's Environmental Classification Document at the following link: <http://www.ct.gov/opm/cwp/view.asp?a=2990&q=383192>

- Will ConnDOT require any documentation of this compliance?

**Discussion of DOT proposal 9** – Upon completion of design activities, when the municipality has a complete Plans Specifications and Estimate (PS&E) package, application will again be made to the Department and MPO with actual PE and ROW costs along with a final construction estimate. At that time, a grant type award will be made to the municipality including 10% for construction contingencies.

- It is unclear exactly how the Town is reimbursed. The statement indicates "Grant Type award", however there is concern if actual payment is postponed and municipalities need to outlay large costs.
- CRCOG was offered the assistance of Manchester financial personnel to inform CRCOG of different Grant types and how they operate
- Clarification of payment schedules and eligibility needs to be laid out
- Determination of agency responsibilities and roles for managing funds, accounting for funds, and where the funds would flow through should be clarified

**Discussion of DOT proposal 10** – Projects will be let through the respective municipalities advertising and low bid process

- Would be best if construction inspection requirements were limited to a Municipal letter to DOT certifying that certain standards were adhered to. Current Construction Inspection requirements could be followed on State Roads if necessary.

**Discussion of DOT proposal 11** – The municipality must obtain an audit of the total cost of the project by a Certified Public Accountant and forward the audit to the Department upon completion of construction.

- Audits are not inexpensive
- Audit costs should be included in the estimated project costs for reimbursement

**Discussion of DOT proposal 12** – Failure to provide an audit is an event of default under the project agreement, and may result in the Department requesting the return of the grant, and the municipality becoming ineligible for future financial assistance

- Will this only affect the regional program, or only municipality that failed to provide an audit?
- This should not be structured to impact the overall region's program.

**Discussion of DOT proposal 13** – The STIP/TIP approval process could not be used by an MPO to leverage access to additional federal STP-Urban funds to be used on town-owned roadways. Penalty would be withholding of State funds in the new Local Transportation Capital Program

- Clarification should be made as to prevent arbitrary punishment of a region based on legitimate TIP/STIP disagreement
- It appears that ConnDOT is only trying to protect the monies they will already have programmed.
- There needs to be protections for our programmed monies also.

#### **Action Items**

CRCOG staff will devise a potential new program process that incorporates this meeting's findings. CRCOG will likely hold a second Working Group meeting for discussion the new process. It is anticipated that this will be held prior to the next Transportation Committee meeting (Oct. 15). Final region comments are due to ConnDOT by Oct. 17.

#### **4. Adjourn**

**Capitol Region Council of Governments**  
**241 Main St., Hartford, CT 06106**  
**Transportation Working Group Meeting**  
**Friday, October 5<sup>th</sup>, 2012**

<b>Name</b>	<b>Organization</b>
Russ Arnold	Farmington
Bill Taylor	Enfield
Mark Carlino	Manchester
Jeffrey Doolittle	South Windsor
Duane Martin	West Hartford
Bob Jarvis	Windsor
John Pagini	Bolton
Jon Colman	Bloomfield

<b>Staff</b>	
Jennifer Carrier	CRCOG
Rob Aloise	CRCOG

1. **Roll Call** – Jon Colman called the meeting to order at 9:05 a.m.
2. **Public Forum** – No one from the public chose to speak.
3. **Approval of September 24, 2012 Working Group Meeting Minutes** – A motion was made by Russ Arnold, seconded by Bill Taylor, to accept the September 24th, 2012 Working Group Meeting Minutes. The motion was passed unanimously.
4. **Discussion of ConnDOT's Draft Proposal for a Local Transportation Capitol Program** – Rob Aloise began by relaying the following information received in a phone conversation with Hugh Hayward of ConnDOT:
  - ConnDOT plans to fund the projects using 20-year bonds, and therefore the projects should be limited to those with similarly long service lives. A 15 year Pavement Rehabilitation project will likely still be eligible, however ConnDOT needs to put in place some mechanism that would ensure the majority of program results in long service life capital improvements.
  - ConnDOT's budget has recently been submitted to OPM, but ConnDOT has not received OPM's response.
  - ConnDOT is considering that, under this new program, projects on State Roads may need to be progressed through an internal ConnDOT design process.
  - It is not ConnDOT's intent to send municipal project submissions throughout the Department's Units for reviews, as is currently the case. It's envisioned that ConnDOT's review will be for service life and eligibility.
  - The proposed eligibility for 90% reimbursement of construction cost (plus 10% construction contingency) is intended to be the maximum amount reimbursed for construction. ConnDOT does not intend to entertain costs beyond this, such as for change orders that increase project costs beyond the contingency.

Jennifer Carrier explained that per the September 24<sup>th</sup> Working Group action item, CRCOG staff devised a potential new program process that incorporated that meeting's findings. The program is explained in a DRAFT letter from CRCOG to ConnDOT and an accompanying Flow-Chart documenting the new project process. Jennifer indicated that we proceed by reviewing the DRAFT documents.

**A. *Review of Draft Project Process Flow Chart –***

Rob Aloise explained the DRAFT Flow Chart detailing a new project delivery process. The following comments were made:

- An independent Consultant Liaison, potentially retained by CRCOG, should review projects for Eligibility and Service Life at the concept design phase, prior to the project initially being sent to ConnDOT. Following any necessary revisions, the project will be sent to ConnDOT along with certification of its Eligibility and Service Life.
- Any DBE requirements should be standardized in the program, perhaps by a pre-determined chart that changes rates with project size.
- The On-Call 35% review should be performed by an independent Consultant Liaison, potentially retained by the MPO.
- Participating and Non-Participating Costs should be determined by CRCOG and/or their independent Consultant Liaison – either during Concept or Preliminary design.
- The use of in-house Consultant Liaison Reviews could speed delivery times and free ConnDOT from these responsibilities.
- Eliminate the word “Reimbursable” from the “Final Project Audit” flow-chart box, as it is preferred that the Grant be a draw down expenditures type.

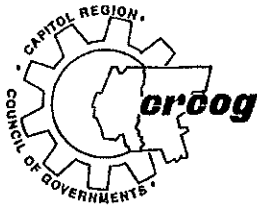
**B. *Review of Draft Letter to ConnDOT –*** Jennifer explained the DRAFT letter detailing a new project delivery process. The following comments were made:

- First Bullet – We should not give up STP-Urban funding until the State funding is secured (perhaps on an annual basis). The differences in State and Federal fiscal years will necessitate timing considerations.
- Second Bullet – Indicate that eligibility criteria should not change from what it is currently.
- Third Bullet – The municipality should be responsible for design even if the project includes a state owned roadway. The letter should propose that an Independent Consultant Liaison, potentially retained by CRCOG, will perform reviews of these projects.
- Fourth Bullet – Eliminate the word “control”
- Fifth Bullet – Revise to indicate a preference for the use of grants with payments on a draw down expenditures basis.
- Closing Paragraph – Attach the Working Group minutes and indicate that further detailed comments are provided in them.
- Do other regions agree with CRCOG's suggestions? CRCOG indicated previous and planned future coordination with SCRCOG

**Action Items**

- CRCOG staff will revise the Letter and Flow Chart per this meeting's comments.
- The revised documents will be presented at the October 15th Transportation Committee meeting.
- Following the Transportation Committee meeting, the documents will be finalized and sent to ConnDOT prior to the October 17th deadline.

**5. Adjourn**



# Capitol Region Council of Governments

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*Mary Glassman, Chairman*

*Lyle D. Wray, Executive Director*

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Mr. James P. Redeker,  
Commissioner  
Connecticut Department of Transportation  
2800 Berlin Turnpike  
Newington, CT 06111

January 13, 2012

Dear Commissioner Redeker,

The Capitol Region Council of Governments (CROCOG) has reviewed the condition of Connecticut's municipally owned bridges in response to concerns from our region's municipalities. Of particular concern is the safety of these bridges and the lack of assistance to municipalities for necessary repairs or reconstruction. In April 2009, Public Act 09-2 de-funded the State Local Bridge Revolving Funding program which had provided such assistance. Attached is the CROCOG report on the Condition of Municipal Bridges in Connecticut. CROCOG is requesting that the information provided herein and attached be viewed in support of reestablishing funding for the State Local Bridge Revolving Fund and other programs that can assist in improving the condition and safety of our municipal bridges. Also, CROCOG is committed to work with you, the Connecticut Department of Energy and Environmental Protection, and local municipalities to streamline the permitting process for bridges in this program.

Based on CROCOG's review of bridge conditions, by most measures Connecticut's municipal bridges are in poorer condition than state bridges as a whole, and in much poorer condition than bridges nationwide. Additionally, the number of deficient bridges appears to be growing and will likely continue to grow without an increase in funding. Key findings of CROCOG's condition assessment:

- Of 15 infrastructure categories, the latest American Society of Civil Engineers (ASCE, 2009) Infrastructure Report Card listed "Bridges" as Connecticut's primary infrastructure concern
- Over a third (33.7% in 2010) of Connecticut's municipal bridges are considered either structurally deficient or functionally obsolete. This is similar to the statewide figure (also 33.7%) but higher than the national rate (24.3%).
- Approximately one in six (15.8%) municipal bridges were classified as structurally deficient (compared to 9.1% statewide and 11.5% nationally)

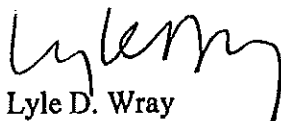
- Bridges are typically designed to last 50 years. The average age of Connecticut's municipal bridges is 51.4 years old (compared to 47.2 statewide and 42 nationally)
- Almost half (43%) of Connecticut's bridges were built in the 1950s and 1960s, and therefore many bridges statewide are approaching the end of their useful lives
- Bridge deficiency rates in Connecticut are increasing while national rates are decreasing
- There is very little recent data regarding the condition of the 64% of municipally owned structures that are not on the National Bridge Inventory. These bridges are not eligible for federal funding under the Local Bridge program and the primary source of State assistance for these bridges, the State Local Bridge Revolving Fund, is no longer funded.

Based on the above, there is a need for increased investment in municipal bridges. The recently de-funded State Local Bridge Revolving Funding program was actively used to maintain bridge safety by providing Towns financial assistance to remove, replace, reconstruct, or rehabilitate local bridges.

CRCOG supports the reinstatement of this and/or other programs that can assist in improving the condition and safety of our municipal bridges. CRCOG also supports the efforts of Connecticut Department of Transportation to implement initiatives that streamline the design and construction of local infrastructure, such as permitting and administrative streamlining, Design-Build initiatives and the implementation of Accelerated Bridge Construction techniques.

Thank you for your consideration.

Sincerely,



Lyle D. Wray  
Executive Director

enc.

cc:

CRCOG Policy Board Members

CRCOG Transportation Committee Members

Ms. Jennifer Carrier, CRCOG Director of Transportation Planning

Mr. Thomas Harley, ConnDOT Bureau of Engineering & Construction - Bureau Chief

# Capitol Region Council of Governments

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## Condition of Municipal Bridges in Connecticut January 13, 2012

Maintaining adequate conditions for municipal bridges is a key element to providing safety and mobility within the transportation network. At the request of the member municipalities, CRCOG staff has drafted the following report on the condition of municipal bridges in Connecticut. Key findings of this assessment include:

- Of 15 infrastructure categories, the latest American Society of Civil Engineers (ASCE, 2009) Infrastructure Report Card listed "Bridges" as Connecticut's primary infrastructure concern
- Over a third (33.7% in 2010) of Connecticut's municipal bridges are considered either structurally deficient or functionally obsolete. This is similar to the statewide figure (also 33.7%) but much higher than the national rate (24.3%).
- Approximately one in six (15.8%) municipal bridges were classified as structurally deficient (compared to 9.1% statewide and 11.5% nationally)
- Bridges are typically designed to last 50 years. The average age of Connecticut's municipal bridges is 51.4 years old (compared to 47.2 years old statewide, and 42 years old nationally)
- Almost half (43%) of Connecticut's bridges were built in the 1950s and 1960s, and therefore many bridges statewide are approaching the end of their useful lives
- Recently, bridge deficiency rates in Connecticut are increasing while the national rate is decreasing
- There is very little recent data regarding the condition of the 64% of municipally owned structures that are not on the National Bridge Inventory. These bridges are not eligible for federal funding under the Local Bridge program, and the primary source of State assistance for these bridges (the State Local Bridge Revolving Fund) is no longer funded.

In 2009, Public Act 09-2 eliminated funding to the Local Bridge Revolving Fund, a major source of grant and loan monies available to rehabilitate and reconstruct municipal bridges. This report underlines the importance of reinstating this and/or similar programs.

### Connecticut's Bridge Infrastructure and Available Data

Within the State of Connecticut, there are currently 7,505 spanning structures, with 3,435 being municipally owned<sup>1</sup>. The *National Bridge Inventory* (NBI) monitors all bridges with spans greater than 20 feet and requires states to regularly inspect all such bridges. Of the 604,000 bridges listed in the NBI, 4,191 are located in Connecticut with 1,239 of them owned by Connecticut municipalities. Due to the completeness and availability of bridge inspection data from the NBI, this report relies heavily upon this resource. *Unless otherwise specified all figures and statistics in this report were obtained through CRCOG analysis of the 2010 National Bridge Inventory Database and refer to bridges that span more than 20 feet.*

It should be noted that about 64% of Connecticut's municipally owned structures span less than 20 feet and therefore are not required to undergo regular inspections and are not represented in the NBI statistics. Perhaps most concerning is that the condition of these bridges is largely unknown. ConnDOT records

contain inspection data for most of these bridges, however almost all of the data (over 90%) was compiled in a statewide inspection effort performed in 1991, making most of the data irrelevant. Only 6% of these bridges have been inspected in the last 20 years<sup>11</sup>.

### Current Bridge Deficiency Rates

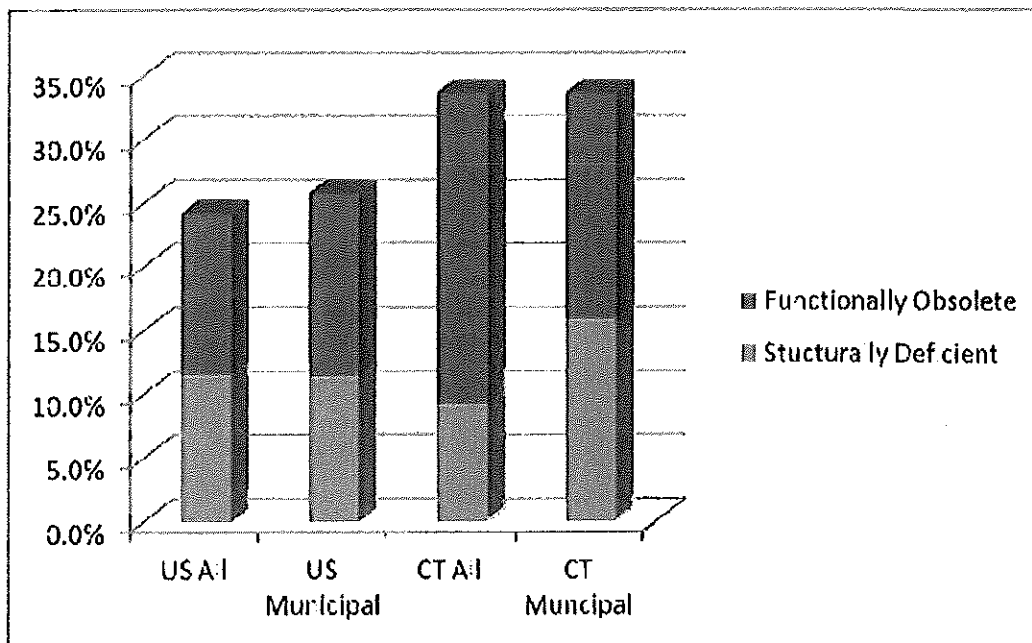
A bridge is considered deficient if it is categorized as either *structurally deficient* or *functionally obsolete*. In reviewing bridge deficiency rates, 33.7% of Connecticut's municipal bridges were categorized as deficient, which is similar to the 33.7% rate for all Connecticut bridges but above the nationwide figure of 24.3%. These high deficiency rates may be the reason why of 15 infrastructure categories, the latest (2009) ASCE Infrastructure Report Card listed "Bridges" as Connecticut's primary infrastructure concern.

Structural deficiency is generally considered a more critical measure of a bridge's condition and may result in speed and weight carrying restrictions, closure, or in the worst cases the potential for collapse. In this category the results for Connecticut are mixed. Statewide, the 9.1% structural deficiency rate is less than the national average of 11.5%, however the 15.8% rate for municipally owned bridges is higher than either the state or national average.

A functionally obsolete bridge has non-conforming design features and geometrics, either because the amount of traffic carried by the bridge exceeds what it was designed for, or because its features do not meet current design standards. Functionally obsolete rates for municipal and statewide bridges are 24.5% and 17.8% respectively, which exceed the national figure of 12.8%.

Figure 1 summarizes bridge deficiency rates for the nation and Connecticut.

**Figure 1: National and Connecticut Bridge Deficiency (Source: FHWA 2010 NBI)**

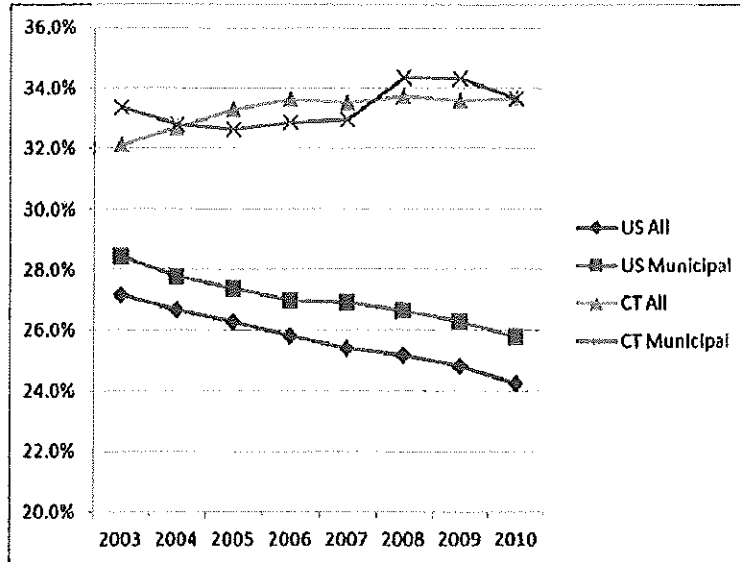




### Bridge Deficiency Trends

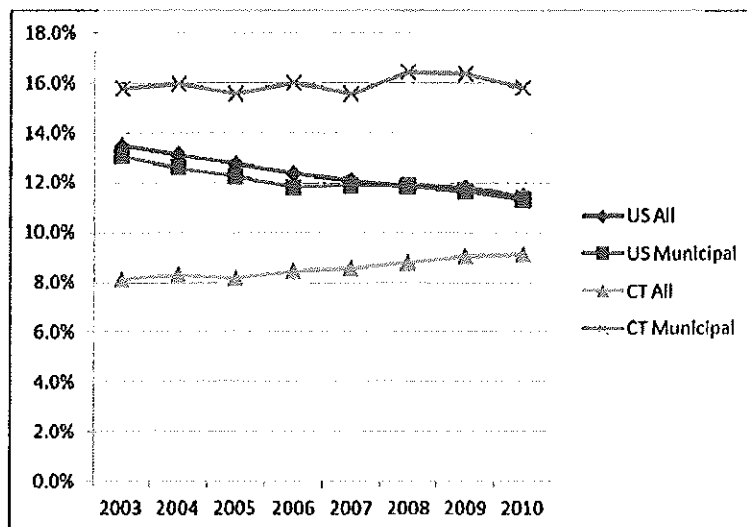
Nationally, steady progress has been made recently in reducing the number of deficient bridges, however conditions for Connecticut Bridges appear to have degraded. These trends are illustrated in Figure 2, which also captures the increasing gap between conditions nationwide and in Connecticut. The result is that for the past decade, deficiency for Connecticut's bridges compared to the 50 states has slipped from 33<sup>rd</sup> to 43<sup>rd</sup> (1 being best, 50 being worst).

Figure 2: U.S. and Connecticut Bridge Deficiency Trends (Source: FHWA 2003-2010 NBI)



Recent trends are similar in the critical structural deficiency category. Figure 3 shows that although steady progress is being made nationally, Connecticut structural deficiency rates are climbing. Structural deficiency for municipally owned bridges remains noticeably higher than the national averages, and if trends continue it appears that Connecticut's overall structural deficiency rate will be higher than the nations by around 2015.

Figure 3: Structural Deficiency Trends (Source: FHWA 2003-2010 NBI)



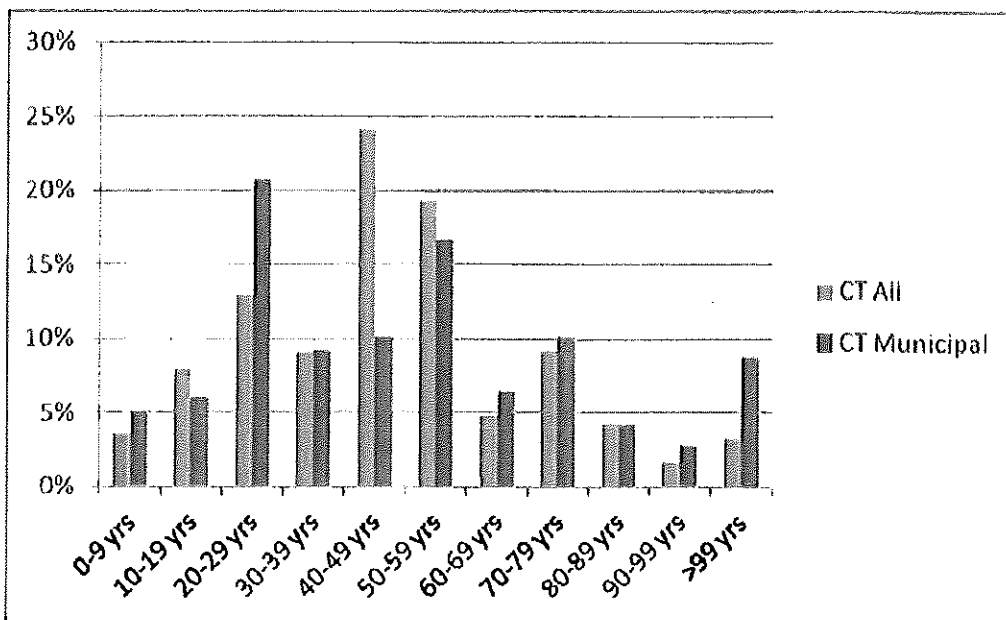
### Connecticut's Aging Bridge Infrastructure

Connecticut's bridge infrastructure is aging, and increasing investments will likely be necessary to maintain current bridge conditions. Most bridges are designed to last roughly 50 years. The average age of the Connecticut's municipal bridges is 51.4 years old and over half of these bridges have exceeded a 50 year life expectancy. The average age of all of all Connecticut bridges is 47.2 years old exceeding the national average age of 42 years<sup>iii</sup>.

Adding to the concern are the number of bridges that will soon be approaching the expected end of their useful life. Heavy investments in new bridge infrastructure took place between 40 and 60 years ago, with approximately 43% of all Connecticut's bridges constructed between 1950 and 1970. These bridges are now reaching an age where major rehabilitation or replacement will likely be necessary soon. This, coupled with a lack of investment in the past few years (only 11% of the State's structures have been constructed in the past 20 years), has resulted in the projection that the number of Connecticut bridges over 50 years old will increase by more than 75% in the next 20 years<sup>iv</sup>. It is clear that increasing investments will be necessary just to maintain current bridge conditions.

Figure 4 shows the age distributions of Connecticut's bridges.

**Figure 4: Age of Connecticut's Bridges (Source: FHWA 2010 NBI)**



### Bridge Funding

As evident from the recent increase in bridge deficiency rates and future projected increases in the age of bridges, it is likely that significant increases in capital investment for bridges are needed to maintain or improve the condition of Connecticut's bridges. Based on bridge deficiency and age statistics identified in this report, funding for municipally owned bridges can be viewed as even more critical.

While federal local bridge program funding is available for some municipal bridges, the majority of municipal bridges (64%) span less than 20 feet, and therefore are not eligible for the funding. Also, of municipal bridges spanning over 20 feet, ConnDOT's 2011 municipal bridge deficiency list indicates that only 233 (43%) of the 536 entries are categorized as eligible for federal funding.

Municipal bridges spanning less than 20 feet were not excluded from funding under Connecticut's Local Bridge Revolving Funding program. The program was able to provide grants from 10 to 33% of project costs, as well as loans up to 50%, to help correct bridges categorized as structurally deficient or functionally obsolete. However, Public Act 09-2 closed the Connecticut's Local Bridge Revolving Funding program to new applications.

If you have any questions regarding this report please feel free to contact Robert Aloise, CRCOG Principal Transportation Engineer at [raloise@crcog.org](mailto:raloise@crcog.org), or Jennifer Carrier, CRCOG Director of Transportation Planning at [jcarrier@crcog.org](mailto:jcarrier@crcog.org).

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- i CRCOG analysis of 2011 ConnDOT Bridge Inventory data
  - ii Ibid.
  - iii The Fix We're In: The State of Connecticut Bridges by T4America - Page 9
  - iv Ibid.